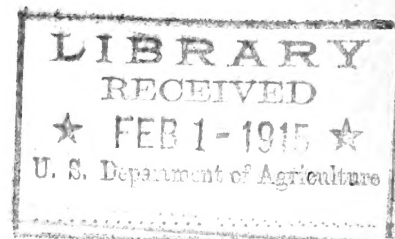


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NEWS LETTER

OF THE

BUREAU OF ENTOMOLOGY

U. S. DEPARTMENT OF AGRICULTURE.

NUMBER 9

DECEMBER 1914.

THE UNIVERSITY OF CHICAGO

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LOCATION OF OFFICES IN THE BUREAU
OF ENTOMOLOGY.

For the first time in several years, the various offices of the Bureau of Entomology, with the exception of the office of Gipsy and Brown-tail Moth Investigations, which is located at 43 Tremont Street, Boston, Mass., are now under one roof, the removal of the Bureau of Biological Survey to the new building on B Street, S. W., having permitted the Bureau of Entomology, to occupy the entire building of their present quarters.

The exact distribution of the several offices, by floors and rooms is herewith appended:

FIRST FLOOR:-

- Room 1, Chief of Bureau.
- 2, Library.
- 3, Editorial Work.
- 4, 7, Truck Crop and Stored Product Insect Investigations.
- 5, 6, Cereal and Forage Insect Investigations.
- 8, 9, & 10, Chief Clerk & Executive Assistant.

SECOND FLOOR:-

- 11, 12, Tropical and Subtropical Fruit Insect Investigations
- 14, Forest Insect Investigations.
- 15, 16, Southern Field Crop Insect Investigations.
- 18, 19, Deciduous Fruit Insect Investigations.

THIRD FLOOR:-

- Bee Culture Investigations.
- Photographic Laboratory.

The Federal Horticultural Board is also quartered in Rooms 13 and 17, of the second floor.

EDITORIAL WORK.

The following publications have been issued since the issuance of the November Newsletter:

- Farmers' Bulletin No. 634, The larger corn stalk-borer,
By Geo. G. Ainslie. Issued Dec. 7, 1914. pp. 8, figs. 4.
- Farmers' Bulletin No. 627, The house centipede, by C. L.
Marlatt. Issued Dec. 15, 1914. pp. 4, figs. 2.
- Bureau Bulletin No. 127, Contents and Index. pp. i-iv, 19-21.
- Department Bulletin No. 161, The Mediterranean fruit fly in Bermuda,
By E. A. Back. Issued Dec. 18, 1914. pp. 8.
- Journal of Agricultural Research, Vol. III, No. 3, Life History
of the melon. Issued Dec. 15, 1914, pp. 6.

SECRET

THE 27TH ANNUAL MEETING OF THE AMERICAN
ASSOCIATION OF ECONOMIC ENTOMOLOGISTS.

THE 9TH ANNUAL MEETING OF THE
ENTOMOLOGICAL SOCIETY OF AMERICA.

The 27th Annual Meeting of the American Association of Economic Entomologists and the 9th Annual Meeting of the Entomological Society of America were held at Philadelphia, Pa., during Convocation Week.

Although some papers were received too late to be read, the following list will indicate the variety and scope of the many entomological problems of the day, confronting scientists of the United States, engaged in this branch of research.

AMERICAN ASSOCIATION OF ECONOMIC ENTOMOLOGISTS.

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- Annual address of the President, "Some present needs of economic entomology." H. T. Fernald, Amherst, Mass.
- "The problems involved in the practical work of controlling the mosquito pest within the limits of a county," by T. J. Headlee. New Brunswick, N. J. (Lantern.)
- "A review of the spotted fever tick in Montana," R. A. Cooley, Bozeman, Mont., (Lantern.)
- "Flies which cause Myiasis in animals," F. C. Bishopp, Dallas, Tex.
- "The academic training of the entomologists in colleges and experiment stations of the United States," W. E. Britton, New Haven, Conn.
- "Suggestions as to the original habitat and distribution of various native insect pests," V. E. Shelford, Urbana, Ill. (Lantern.)
- "The life history of *Oberia ulmicola* (?) " by A. G. Ruggles, St. Paul, Minn.
- "The brown-tail moth in Canada," C. G. Hewitt, Ottawa, Canada. (Lantern.)
- "Contact sprays for brown-tail caterpillars," C. G. Hadley, Jr. Durham, N. H.
- "Fumigation for the box leaf-miner," E. P. Felt, Albany, N. Y.
- "Notes on plant-lice having alternate food habits," C. P. Gillette, Fort Collins, Colo.
- "A new air-conditioning apparatus," Geo. A. Dean & R. K. Nabours, Manhattan, Kans. (Lantern.)
- "Spraying scheme for the control of insect pests," W. W. Yothers, Orlando, Fla.
- "The citricola scale (*Coccus citricola*)", H. J. Quayle, Riverside, Cal.
- "An analysis of spraying methods against the codling moth," P. J. Parrott, Geneva, N. Y. (Lantern.)
- "Apple leaf-roller in Utah," E. G. Titus, Logan, Utah. (Lantern.)
- "Further data on the control of the fruit-tree leaf-roller (*Archips argyrospila*)," Glenn W. Herrick.

AMERICAN ASSOCIATION OF ECONOMIC ENTOMOLOGISTS. (Continued).

- "Preliminary report on the woolly aphis," E. N. Cory,
College Park, Md.
- "Arsenical residues on fruit and grass," W. C. O'Kane, Durham, N. H.
- "The work of the cotton worms and moth in Missouri," L. Haseman,
Columbia, Mo. (Lantern.)
- "The cranberry root-worm," H. B. Scammell, Pemberton, N. J.
- "Arsenate of lime as an insecticide," W. M. Scott, Baltimore, Md.
- "Frauds, semifrauds and questionables," H. A. Surface,
Harrisburg, Pa.
- "The nicotine sulphate-Bordeaux combination," by V. I. Safro,
Louisville, Ky.
- "Insecticidal properties of various sulphides and polysulphides,"
P. J. Parrott & W. J. Schoene, Geneva, N. Y.
- "A new contact insecticides," W. M. Scott, Baltimore, Md.
- "Recent results in the use of dust sprays for controlling the
corn-ear worm," W. J. McCulloch, Manhattan, Kans. (Lantern.)
- "The corn-ear worm and its control," L. Haseman, Columbia, Mo.
(Lantern.)
- "Further use of poisoned bran mash flavored with fruit juice for
controlling insects," Geo. A. Dean, Manhattan, Kans. (Lantern.)
- "Grasshopper control in New York State," E. P. Felt.
- "Notes on insects attacking Sudan grass," Wilmon Newell, College
Station, Texas.
- "Some economic results of the year," S. J. Hunter, Lawrence, Kans.
- "An unique type of insect injury," W. R. McConnell, Hagerstown, Md.
- "A mechanical measure for controlling the flea-beetle (*Epitrix
fuscata*) on potato," C. L. Metcalf, Columbus, Ohio. (Lantern.)
- "An outbreak of the alfalfa looper (*Autographa gamma californica*)",
J. R. Parker, Bozeman, Mont.
- "The habits of *Sarcophagidae*," J. M. Aldrich, La Fayette, Ind.
- "Further data on the life economy of the cinch-bug egg-parasite,"
W. J. McCulloch, Manhattan, Kans.
- "Efficiency of parasites of the San Jose scale," H. A. Surface,
Harrisburg, Pa. (Lantern.)
- "Insects of the year in Utah," E. G. Titus, Logan, Utah.

Section of Apiary Inspection:-

- Address by the Chairman, Wilmon Newell, College Station, Texas.
- "Distribution of American foul brood and European foul brood in
the United States," E. F. Phillips, Washington, D. C.
- "A simple record system for apiary inspection," W. E. Britton,
New Haven, Conn.
- "Inspection as a unit in the Massachusetts apicultural service,"
Burton N. Gates.

ENTOMOLOGICAL SOCIETY OF AMERICA.

- "Ecological foundations of applied entomology," S. A. Forbes, University of Illinois.
- "A history of the Entomological Society of America," Henry Skinner, Academy of Natural Sciences.
- "Food habits of some Colorado aphids," C. P. Gillette, Ft. Collins, Colo. (Lantern.)
- "A photographic record of the development of the female *Lepidosaphes ulmi* Linn.," E. A. Corley, Montana Agricultural College. (Lantern.)
- "The poison glands of *Automeris* io Fab.," Cornelia F. Kephart, Cornell University. (Lantern.)
- "Geographical distribution of Neuropteroid insects, together with an analysis of our insect fauna," Nathan Banks, Falls Church, Va.
- "The biology of *Nymphula maculalis* Clem.," Paul S. Welch, Kansas Agricultural College.
- "Modification of tiger-beetle colors by temperature and moisture," V. E. Shelford, University of Illinois. (Lantern.)
- "Life-history, development and work of unspotted tentiform leaf-miner of apple," L. Haseman, University of Missouri. (Lantern.)
- "Results of twenty-five years collecting in the Tachinidae," J. M. Aldrich, La Fayette, Ind.
- "On proper generic concepts," Chas. T. Townsend, U. S. National Museum.
- "Interpretation of the codling-moth data from Colorado," C. P. Gillette, Ft. Collins, Colo. (Lantern.)
- "Suggestions for discovering affinity and phylogeny," Nathan Banks, Bureau of Entomology.
- "Insect notes from Colorado," C. P. Gillette, Ft. Collins, Colo.
- "The modification of the subcostal vein in the wings of insects," A. D. MacGillivray, University of Illinois. (Lantern.)
- "The olfactory sense of Coleoptera," N. E. McIndoo, Washington, D. C.

NEW BOOKS IN LIBRARY.

- Cassino, Samuel E. Naturalist's Directory, compiled in 1914. Salem, Mass., 1914. 315p.
- Cecconi, Giacomo Manuale di Entomologia Forestale, fasc. 2. Firenze, 1914. 65-128p. illus.
- Fabre, J. H. The Mason Bees. Translated by Alexander Teixeira de Mattos. New York, Dodd, Mead and Company, 1914. 315p.
- Herrick, Glenn, W. Insects Injurious to the Household and Annoying to Man. New York, The Macmillan Company, 1914. 470p. illus. 8 plates.

Useful short lists of references to the different groups of insects- e. g. Carpet beetles, Poisonous Insects etc- are scattered through the volume.

NEW BOOKS IN LIBRARY. (Continued).

India-Dept. of Agriculture, Behar and Orissa. Crop Pest Handbook for Behar and Orissa (including also Western Bengal). Calcutta, Thacker, Spink & Co., 1913. 82 separately paged "Leaflets", 54 plates (mostly colored)

The pests are grouped under the crop and the crops under large divisions, as I. Cereals. II. Pulses. III. Oilseeds. IV. Fibres. V. Spices, drugs and narcotics. VI. Sugar. VII. Dyes. VIII. Vegetables. IX. Fruits. X. Palms.

Quebec Society for the Protection of Plants from Insects and Fungous Diseases 1913-1914. Sixth Annual Report. Quebec, 1914. 85p. illus.

Report of the Secretary of Agriculture 1914.- D. F. Houston. 48p.

Reports of the Chiefs of the different Bureaus, Divisions and Offices of the U. S. Department of Agriculture (From Annual Report of the Department of Agriculture 1914).

BEE CULTURE.

Dr. E. F. Phillips, In Charge.

The apiary is now located at Drummond, Montgomery County, Md., and can be reached by the Tanleytown cars.

FOREST INSECT INVESTIGATIONS.

A. D. Hopkins, In Charge.

Entomological Assistant W. D. Edmonston and Entomological Ranger George Hofer have joined Entomological Ranger Morris Chrisman in an investigation of forest insect conditions in the mountains of Southern Arizona.

The reports on experimentation and demonstration control work against the Dendroctonus beetles, carried on in the Yosemite National Park in co-operation with the Department of the Interior, with Entomological Ranger J. J. Sullivan as instructor on practical details, and on private lands of the McCloud River Lumber Company, north of Mt. Shasta, in California, with Entomological Ranger J. D. Riggs as instructor, show the following results:

In the Yosemite Valley and vicinity, at an elevation of from 4,000 to 7,500 feet, 302 Dendroctonus infested trees were treated consisting of yellow, Jeffrey, and sugar pine. The trees ranged in diameter, breast high, from 12 to 68 inches, with an average of 31 inches. The average cost of felling, barking, and the necessary burning was \$2.57 per tree.

In the Toulumne River and Tenaya Creek drainage of the Yosemite Park, at an elevation of from 8,000 to 9,500 feet, 2,018 infested lodgepole pine trees, ranging in diameter from 14 to 52 inches, averaging 23.7 inches, were treated at an average cost of \$1.13 per tree for felling and burning the bark on the trunks sufficiently to kill the insects. Fifteen hundred and eighty-four infested trees were treated in this general area in 1913.

The total number of trees treated in the Valley and Park during 1913 and 1914 were 3,904, at a total cost for control work of \$4,713.46, or an average of \$1.21 per tree.

FOREST INSECT INVESTIGATIONS. (Continued).

In September, 1914, a careful cruise was made by Entomological Assistant J. M. Miller and Mr. Sullivan of the areas treated in 1913, which showed that the removal of from 74% to 99% of the infestation within the control areas had resulted in a reduction of from 33% to 87% in the infestation of 1914, as compared with that of 1913.

With the present season's control work, it is expected that the depredations by *Dendroctonus monticolae* Hopk., which in past years has killed from 50% to 100% of the lodgepole pine over vast areas in the Toulumne watershed, will be brought under complete control.

In the demonstration control project with the McCloud River Lumber Company, in 1914, 1,076 infested yellow pine trees, averaging 27 inches in diameter, were treated at an average cost of \$2.34 per tree. Work on this project was begun in May, 1913, when 236 infested trees were treated, with in an area of 4,320 acres. This work was done merely to give instructions in methods, yet a recruise in September, 1913, and again in the spring of 1914, shows a reduction in the infestation within the area of over 85%. It is estimated that only about 75% of the infestation was disposed of on and adjacent to this area in 1913.

In both of these control projects, the owners have borne all of the expenses except the salaries of the entomological rangers assigned to superintend the carrying out of the practical details of the methods recommended. These demonstration projects in California are of special interest because they have led to the adoption of a regular insect control policy by the officials of the Yosemite National Park and by one of the largest companies of private owners of timber and manufacturers of lumber in the State. The Forest Service is also becoming active in that State in taking up control work in the National Forests.

PREVENTING SPREAD OF MOTHS.

A. F. Burgess, In Charge.

The scouting force of this branch now has 50 parties of men in the field. The entire boundary of the quarantined area in Maine has been covered, a total of 59 towns having been scouted, and only four have been found infested. On the western border of infestation about 125 towns have been scouted and in some of these the men are now working. Some western spread has been noted. Favorable weather has enabled the force to make excellent progress this year. Scouts are now working at the recently found colony in Rutherford, N. J. and at Mt. Kisco, N. Y. At Mt. Kisco a very remarkable decrease in infestation has been noted. As many as 325 men have been employed this season.

The adults of the cankerworm are unusually abundant this autumn and caterpillars of this insect are likely to do considerable damage in eastern Massachusetts in 1915 unless careful spraying is done.

The quarantine on Christmas trees and greenery is becoming better understood by the people in the gipsy-moth area and the danger of disseminating egg-clusters of the moth through the careless shipment of holiday decorations is much less during the present season. Two men are kept busy in Boston for two or three weeks prior to December 25 checking shipments by dealers and watching offices.

FOR THE MONTH OF JANUARY 1911

IN THE MONTH OF JANUARY 1911

U. S. DEPARTMENT OF AGRICULTURE

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SOUTHERN FIELD CROP INSECT INVESTIGATIONS.

W. D. Hunter, In Charge.

R. W. Howe and F. L. McDonough reported at Washington from the field stations at Tallulah, La., and Batesburg, S. Car., respectively, during the month.

A general conference was held on December 18 to consider the danger of the introduction of the pink boll worm in the United States. The consensus of opinion expressed was that the present situation demands a quarantine against all foreign lint with a provision for the importation of such cotton only in States outside of the cotton belt. It was also proposed that such southern mills as require foreign cottons be allowed to obtain it from stocks which have been in storage in northern localities for at least a year's time.

TRUCK CROP AND STORED PRODUCT INSECT INVESTIGATIONS.

F. H. Chittenden, In Charge.

During January Mr. Charles H. Popenoe, Entomological Assistant, will be engaged at Laredo, Texas, in what is recognized as the principal onion-growing region of the South, in cooperation with Mr. M. M. High, in testing a traction sprayer designed especially for onion fields.

Mr. Roy E. Campbell, Scientific Assistant, formerly stationed at Sacramento, Cal., will remove his headquarters there and establish a new station at Hayward, Alameda Co., Cal.

Mr. Fred A. Johnston, Entomological Assistant, will close the station representing this branch of the Bureau at Riverhead, Long Island, N. Y., and will establish a new station at Hart, Oceana Co., Mich. One of the most important economic projects will be the control of the pea aphid.

Mr. H. O. Marsh, Entomological Assistant, is temporarily stationed at Phoenix, Ariz.

Mr. C. F. Stahl, Scientific Assistant, has closed his station at Jerome, Idaho, and is opening a new station at Spreckels, Monterey Co., Cal., for the study of the curly-top leafhopper (*Eutettix tenella* Baker).

TROPICAL AND SUBTROPICAL INSECT INVESTIGATIONS.

C. L. Marlatt, In Charge.

Mr. W. W. Yothers was in Washington for consultation on citrus work in Florida. Mr. Sasser is in Florida inspecting Government plant introduction stations and looking after details of the enforcement of plant quarantines.

1957-1958